STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

JOHN ELIAS BALDACCI
GOVERNOR

DAVID P. LITTELL
COMMISSIONER

July 5, 2006

Mr. Russell Mathers
Town of Wilton
P.O. Box 541
Wilton, ME. 04294

RE: Maine Pollutant Discharge Elimination System Permit #ME0101915
Maine Waste Discharge License Application #W002365-5L-D-R
Final Permit/License

Dear Mr. Mathers:

Enclosed please find a copy of your **final** MEPDES permit/WDL (permit hereinafter)which was approved by the Department of Environmental Protection. You must follow the conditions in the permit to satisfy the requirements of law. Any discharge not receiving adequate treatment is in violation of State Law and is subject to enforcement action.

Any interested person aggrieved by a Department determination made pursuant to applicable regulations, may appeal the decision following the procedures described in the attached DEP FACT SHEET entitled "*Appealing a Commissioner's Licensing Decision.*"

If you have any questions regarding the matter, please feel free to call me at 287-7693.

Sincerely,

Gregg Wood
Division of Water Quality Management
Bureau of Land and Water Quality

Enc.
cc: Beth DeHaas, DEP/CMRO
Sandy Lao, USEPA

AUGUSTA
17 STATE HOUSE STATION
AUGUSTA, MAINE 04333-0017
(207) 287-7688 FAX: (207) 287-7826
RAY BLDG., HOSPITAL ST.

BANGOR
106 HOGAN ROAD
BANGOR, MAINE 04401
(207) 941-4570 FAX: (207) 941-4584

PORTLAND
312 CANCO ROAD
PORTLAND, MAINE 04103
(207) 822-6300 FAX: (207) 822-6303

PRESQUE ISLE
1235 CENTRAL DRIVE, SKYWAY PARK
PRESQUE ISLE, MAINE 04769-2094
(207) 764-0477 FAX: (207) 760-3143

web site: www.maine.gov/dep

STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION
STATE HOUSE STATION 17 AUGUSTA, MAINE 04333

DEPARTMENT ORDER

IN THE MATTER OF

TOWN OF WILTON	)	MAINE POLLUTANT DISCHARGE
PUBLICLY OWNED TREATMENT WORKS	)	ELIMINATION SYSTEM PERMIT
WILTON, FRANKLIN COUNTY, MAINE	)	AND
ME0101915	)	WASTE DISCHARGE LICENSE
W002365-5L-D-R **APPROVAL**	)	**RENEWAL**

Pursuant to the provisions of the Federal Water Pollution Control Act, Title 33 USC, Section 1251, et. seq. and Maine Law 38 M.R.S.A., Section 414-A et seq., and applicable regulations, the Department of Environmental Protection (the Department hereinafter) has considered the application of the TOWN OF WILTON (Town hereinafter), with its supportive data, agency review comments, and other related material on file and finds the following facts:

APPLICATION SUMMARY

The Town has submitted a timely and complete application to the Department to renew combination Maine Pollutant Discharge Elimination System (MEPDES) permit #ME0101915/Waste Discharge License (WDL) #W002365-5L-C-R (permit hereinafter) which was issued on August 22, 2001 and is due to expire on August 22, 2006. The 8/22/01 permit authorized the discharge of up to a monthly average flow of 0.45 million gallons per day (MGD) of secondary treated sanitary waste waters to Wilson Stream, Class C, in Wilton, Maine.

MODIFICATIONS REQUESTED

The permittee has requested the following modifications to the MEPDES permit:

1. Delete the seasonal (June 1 – September 30) water quality based mass limits for biochemical oxygen demand (BOD) and total suspended solids (TSS) and establish year-round technology based BOD and TSS mass limits based on the facility's monthly average design flow of 0.45 MGD.

2. Change the seasonal (June 1 – September 30) water quality based mass limit for total phosphorus to a reporting requirement.

PERMIT SUMMARY

This permitting action is carrying forward all the terms and conditions of the 8/21/01 permitting action and establishing new requirements that include, but are not limited to, the following:

1) Establishing year-round technology based mass and concentration limits for BOD and TSS.

2) Establishing a requirement to maintain an up-to-date Operations & Maintenance (O&M) plan.

PERMIT SUMMARY

3) Establishing a requirement to maintain an up-to-date Wet Weather Flow Management plan.

4) Placing the monthly average water quality based total phoshorus limitation into abeyance and replacing the limit with a reporting requirement until the Department completes its ambient water quality monitoring of the Sandy River watershed including Wilson Stream.

5) Establishing monthly average and or daily maximum water quality based mass and concentration limitations for copper, lead and silver.

6) Incorporating new whole effluent toxicity (WET), priority pollutant and analytical chemistry monitoring requirements pursuant to the Department's recently revised rule Chapter 530, *Surface Water Toxics Control Program.*

7) Reducing the monitoring frequency for settleable solids from 1/Day to 3/Week.

CONCLUSIONS

BASED on the findings in the attached Fact Sheet dated June 2, 2006, and subject to the Conditions listed below, the Department makes the following CONCLUSIONS:

1. The discharge, either by itself or in combination with other discharges, will not lower the quality of any classified body of water below such classification.

2. The discharge, either by itself or in combination with other discharges, will not lower the quality of any unclassified body of water below the classification which the Department expects to adopt in accordance with state law.

3. The provisions of the State's antidegradation policy, 38 MRSA Section 464(4)(F), will be met, in that:

   a. Existing in-stream water uses and the level of water quality necessary to protect and maintain those existing uses will be maintained and protected;

   b. Where high quality waters of the State constitute an outstanding natural resource, that water quality will be maintained and protected;

   c. The standards of classification of the receiving water body are met or, where the standards of classification of the receiving water body are not met, the discharge will not cause or contribute to the failure of the water body to meet the standards of classification;

   d. Where the actual quality of any classified receiving water body exceeds the minimum standards of the next highest classification, that higher water quality will be maintained and protected; and

CONCLUSIONS (cont'd)

e. Where a discharge will result in lowering the existing quality of any water body, the Department has made the finding, following opportunity for public participation, that this action is necessary to achieve important economic or social benefits to the State.

4. The discharge will be subject to effluent limitations that require application of best practicable treatment (BPT).

ACTION

THEREFORE, the Department APPROVES the application of the TOWN OF WILTON, to discharge up to a monthly average flow of 0.45 million gallons per day (MGD) of secondary treated waste waters to Wilson Stream, Class C, in Wilton, Maine. The discharges shall be subject to the attached conditions and all applicable standards and regulations including:

1. "*Maine Pollutant Discharge Elimination System Permit Standard Conditions Applicable To All Permits*," revised July 1, 2002, copy attached.

2. The attached Special Conditions, including any effluent limitations and monitoring requirements.

3. This permit expires five (5) years from the date of signature below.

DONE AND DATED AT AUGUSTA, MAINE, THIS 7TH DAY OF July 2006.

COMMISSIONER OF ENVIRONMENTAL PROTECTION

BY: _____ for
David P. Littell, COMMISSIONER

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application February 12, 2006.

Date of application acceptance February 12, 2006.

Date filed with Board of Environmental Protection

FILED
JUL 10 2006
BOARD OF ENVIRONMENTAL PROT.
STATE OF MAINE

This Order prepared by GREGG WOOD, BUREAU OF LAND & WATER QUALITY
W23655LD 7/5/06

SPECIAL CONDITIONS

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

The permittee is authorized to discharge **secondary treated waste waters** to Wilson Stream. Such treated waste water discharges shall be limited and monitored by the permittee as specified below.

OUTFALL #001

Effluent Characteristic	Discharge Limitations						Minimum Monitoring Requirements	
	Monthly Average as specified	Weekly Average as specified	Daily Maximum as specified	Monthly Average as specified	Weekly Average as specified	Daily Maximum as specified	Measurement Frequency as specified	Sample Type as specified
Flow *[50050]*	0.45 MGD *[03]*	---	Report (MGD)	---	---	---	Continuous *[99/99]*	Recorder *[RC]*
Biochemical Oxygen Demand (BOD_5) *[00310]*	113 lbs/Day *[26]*	169 lbs/Day *[26]*	188 lbs/Day *[26]*	30 mg/L *[19]*	45 mg/L *[19]*	50 mg/L *[19]*	1/Week *[01/07]*	Composite *[24]*
BOD_5 % Removal (1) *[81010]*	---	---	---	85% *[23]*	---	---	1/Month *[01/30]*	Calculate *[CA]*
Total Suspended Solids (TSS) *[00530]*	113 lbs/Day *[26]*	169 lbs/Day *[26]*	188 lbs/Day *[26]*	30 mg/L *[19]*	45 mg/L *[19]*	50 mg/L *[19]*	1/Week *[01/07]*	Composite *[24]*
TSS % Removal (1) *[81011]*	---	---	---	85% *[23]*	---	---	1/Month *[01/30]*	Calculate *[CA]*
Settleable Solids *[00545]*	---	---	---	---	---	0.3 ml/L *[25]*	3/Week *[03/07]*	Grab *[GR]*
E. coli Bacteria (2) *[31633]* *(May 15 – September 30)*	---	---	---	142/100 ml (3) *[13]*	---	949/100 ml *[13]*	1/Week *[01/07]*	Grab *[GR]*
Total Residual Chlorine (4) *[50060]*	---	---	---	0.1 mg/L *[19]*	---	0.22 mg/L *[19]*	1/Day *[01/01]*	Grab *[GR]*
pH *[00400]*	---	---	---	---	---	6.0-9.0 SU *[12]*	5/Week *[05/07]*	Grab *[GR]*

SPECIAL CONDITIONS

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)

Effluent Characteristic	Discharge Limitations						Minimum Monitoring Requirements	
	Monthly Average as specified	Weekly Average as specified	Daily Maximum as specified	Monthly Average as specified	Weekly Average as specified	Daily Maximum as specified	Measurement Frequency as specified	Sample Type as specified
Total Phosphorus *[00665]* *(June 1 – September 30)*	Report lbs/Day *[26]*	---	Report lbs/Day *[26]*	Report mg/L *[19]*	---	Report mg/L *[19]*	2/Month(5) *[02/30]*	Composite *[24]*
Orthophosphate *[70507]* *(June 1 – September 30)*	Report lbs/Day *[26]*	---	Report lbs/Day *[26]*	Report mg/L *[19]*	---	Report mg/L *[19]*	2/Month(5) *[02/30]*	Composite *[24]*
Copper (Total) *[01042]*	0.081 lbs/Day *[26]*	---	0.10 lbs/Day *[26]*	32 ug/L *[28]*	---	57 ug/L *[28]*	1/Quarter *[01/90]*	Composite *[24]*
Lead (Total) *[01051]*	0.014 lbs/Day *[26]*	---	---	5.6 ug/L *[28]*	---	---	1/Quarter *[01/90]*	Composite *[24]*
Silver (Total) *[01077]*	0.0078 lbs/Day *[26]*	---	---	3.1 ug/L *[28]*	---	---	1/Quarter *[01/90]*	Composite *[24]*

SPECIAL CONDITIONS
A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)

SURVEILLANCE LEVEL TESTING – Beginning upon permit issuance and lasting through twelve months prior to permit expiration.

Effluent Characteristic	Discharge Limitations						Minimum Monitoring Requirements	
	Monthly Average	Weekly Average	Daily Maximum	Monthly Average	Weekly Average	Daily Maximum	Measurement Frequency	Sample Type
Whole Effluent Toxicity (WET) [6]								
A-NOEL								
Ceriodaphnia dubia [TDA3B]	---	---	---	---	---	Report % [23]	2/Year [02/YR]	Composite [24]
Salvelinus fontinalis [TDA6F]	---	---	---	---	---	Report % [23]	1/Year [01/YR]	Composite [24]
C-NOEL								
Ceriodaphnia dubia [TBP3B]	---	---	---	---	---	8.5 % [23]	2/Year [02/YR]	Composite [24]
Salvelinus fontinalis [TBQ6F]	---	---	---	---	---	Report % [23]	1/Year [01/YR]	Composite [24]
Analytical Chemistry[7] [51168]	---	---	---	---	---	Report ug/L [28]	1/Year [01/90]	Composite/Grab [24/GR]

SCREENING LEVEL TESTING – Beginning twelve months prior to permit expiration and every five years thereafter.

	Monthly Average	Weekly Average	Daily Maximum	Monthly Average	Weekly Average	Daily Maximum	Measurement Frequency	Sample Type
Whole Effluent Toxicity (WET) [6]								
A-NOEL								
Ceriodaphnia dubia [TDA3B]	---	---	---	---	---	Report % [23]	1/Quarter [01/90]	Composite [24]
Salvelinus fontinalis [TDA6F]	---	---	---	---	---	Report % [23]	1/Quarter [01/90]	Composite [24]
C-NOEL								
Ceriodaphnia dubia [TBP3B]	---	---	---	---	---	8.5 % [23]	1/Quarter [01/90]	Composite [24]
Salvelinus fontinalis [TBQ6F]	---	---	---	---	---	Report % [23]	1/Quarter [01/90]	Composite [24]
Analytical Chemistry[7] [51168]	---	---	---	---	---	Report ug/L [28]	1/Quarter [01/90]	Composite/Grab [24/GR]
Priority pollutant[8] [50008]	---	---	---	---	---	Report ug/L [28]	1/Year [01/YR]	Composite/Grab [24/GR]

SPECIAL CONDITIONS

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)

Footnotes:

Sampling Locations:

Influent sampling for BOD_5 and TSS shall be sampled at the head-end of the screw pumps.

Effluent sampling for all parameters shall be conducted at the end of the chlorine contact chamber on a year-round basis.

Any change in sampling location(s) must be reviewed and approved by the Department in writing.

Sampling – Sampling and analysis must be conducted in accordance with; a) methods approved by 40 Code of Federal Regulations (CFR) Part 136, b) alternative methods approved by the Department in accordance with the procedures in 40 CFR Part 136, or c) as otherwise specified by the Department. Samples that are sent out for analysis shall be analyzed by a laboratory certified by the State of Maine's Department of Human Services.

Stream flow - The Town of Wilton shall make every reasonable effort, within its capacity, to operate the Wilson Pond dam such that a minimum stream flow of 7.5 cfs is maintained in Wilson Stream at all times. The Town shall notify the Department as soon as possible if the minimum stream flow cannot be maintained for any reason.

1. **Percent removal** - The treatment facility shall maintain a minimum of 85 percent removal of both BOD_5 and TSS. The percent removal shall be based on a monthly average calculation using influent and effluent concentrations. The percent removal shall be waived when the monthly average influent concentration is less than 200 mg/L. For instances when this occurs, the facility shall report "*NODI-9*" on the monthly Discharge Monitoring Report.

2. ***E. coli*** **bacteria** - Limits are seasonal and apply between May 15 and September 30 of each calendar year. The Department reserves the right to require disinfection on a year-round basis to protect the health and welfare of the public.

3. ***E. coli*** **bacteria** – The monthly average limitation is a geometric mean limitation and shall be calculated and reported as such.

SPECIAL CONDITIONS

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)

Footnotes:

4. **Total Residual Chlorine (TRC)** – Limitations and monitoring requirements are applicable whenever elemental chlorine or chlorine based compounds are being used to disinfect the discharge. TRC shall be tested using Amperometric Titration or the DPD Spectrophotometric Method. The EPA approved methods are found in Standard Methods for the Examination of Water and Waste Water, (most current approved edition), Method 4500-CL-E and Method 4500-CL-G or U.S.E.P.A. Manual of Methods of Analysis of Water and Wastes.

5. **Total phosphorus & Orthophosphate** – There shall be at least ten days (10) between routine sampling events. See Attachment B of this permit for protocols.

6. **Whole effluent toxicity (WET) testing** - Definitive WET testing is a multi-concentration testing event (a minimum of five dilutions bracketing the critical acute and chronic thresholds of 8.5%), which provides a point estimate of toxicity in terms of No Observed Effect Level, commonly referred to as NOEL or NOEC. A-NOEL is defined as the acute no observed effect level with survival as the end point. C-NOEL is defined as the chronic no observed effect level with survival, reproduction and growth as the end points. The critical acute and chronic thresholds were derived as the mathematical inverse of the applicable acute and chronic dilution factors of 11.8:1.

   a. **Surveillance level testing** - Beginning upon permit issuance and last through 12 months prior to permit expiration, the permittee shall conduct surveillance level WET testing. Acute and chronic tests shall be conducted on the the water flea (Ceriodaphnia dubia) at a frequency of 2/Year between the months of October and March. There shall be a minimum of 90 days between testing events. Tests on the brook trout (Salvelinus fontinalis) shall be conducted at a frequency of 1/Year and tests shall be conducted in a different calendar quarter each year such that a test is conducted in all four calendar quarters in the first four years of the term of the permit.

   b. **Screening level testing** - Beginning 12 months prior to permit expiration and every five years thereafter, the permittee shall conduct screening level WET testing at a minimum frequency of once per calendar quarter (1/Quarter) for four consecutive calendar quarters. Acute and chronic tests shall be conducted on the water flea (Ceriodaphnia dubia) and the brook trout (Salvelinus fontinalis).

SPECIAL CONDITIONS

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)

Footnotes:

WET test results must be submitted to the Department not later than the next Discharge Monitoring Report (DMR) required by the permit, provided, however, that the permittee may review the toxicity reports for up to 10 business days of their availability before submitting them. The permittee shall evaluate test results being submitted and identify to the Department possible exceedences of the critical acute and chronic water quality thresholds of 8.5%.

Toxicity tests must be conducted by an experienced laboratory approved by the Department. The laboratory must follow procedures as described in the following U.S.E.P.A. methods manuals.

U.S. Environmental Protection Agency. 2002. *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms*, 5th ed. EPA 821-R-02-012. U.S. Environmental Protection Agency, Office of Water, Washington, D.C., October 2002 (the acute method manual)

U.S. Environmental Protection Agency. 2002. *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms*, 4th ed. EPA 821-R -02-013. U.S. Environmental Protection Agency, Office of Water, Washington, D.C., October 2002 (the freshwater chronic method manual)

The permittee is also required to analyze the effluent for the parameters specified in the analytical chemistry on the form in Attachment A of this permit each time a WET test is performed.

7. **Analytical chemistry** – Refers to a suite of chemical tests that include ammonia nitrogen (as N), total aluminum, total arsenic, total cadmium, total chromium, total copper, total cyanide, total lead, total nickel, total silver, total zinc and total residual chlorine.

   a. **Surveillance level testing** – Beginning upon permit issuance and lasting through 12 months prior to permit expiration, the permittee shall conduct analytical chemistry testing at a minimum frequency of once per year (1/Year). Tests are to be conducted in a different calendar quarter of each year such that a test is conducted in all four calendar quarters in the first four years of the term of the permit.

   b. **Screening level testing** – Beginning 12 months prior to permit expiration and every five years thereafter, the permittee shall conduct analytical chemistry testing at a minimum frequency of once per calendar quarter (1/Quarter) for four consecutive calendar quarters.

SPECIAL CONDITIONS

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)

Footnotes:

8. **Priority pollutant testing** – Priority pollutants are those parameters listed by Department rule, Chapter 525, Section 4(IV).

   a. **Screening level testing** - Beginning 12 months prior to permit expiration and lasting through permit expiration and every five years thereafter, the permittee shall conduct screening level priority pollutant testing at a minimum frequency of once per year (1/Year). It is noted Chapter 530 does not establish routine surveillance level priority pollutant testing.

Analytical chemistry and priority pollutant testing shall be conducted on samples collected at the same time as those collected for WET tests, when applicable. Analytical chemistry and priority pollutant testing shall be conducted using methods that permit detection of a pollutant at existing levels in the effluent or that achieve minimum reporting levels of detection as specified by the Department. See Attachment A of this permit for a list of the Department's reporting levels of detection. Test results must be submitted to the Department not later than the next Discharge Monitoring Report (DMR) required by the permit, provided, however, that the permittee may review the toxicity reports for up to 10 business days of their availability before submitting them. The permittee shall evaluate test results being submitted and identify to the Department, possible exceedences of the acute ,chronic or human health AWQC as established in Department rule Chapter 584. For the purposes of Discharge Monitoring Report (DMR) reporting, enter a "1" for yes, testing done this monitoring period or "NODI-9" monitoring not required this period.

All mercury sampling required by this permit or required to determine compliance with interim limitations established pursuant to Department rule Chapter 519, shall be conducted in accordance with EPA's "clean sampling techniques" found in EPA Method 1669, Sampling Ambient Water For Trace Metals At EPA Water Quality Criteria Levels. All mercury analysis shall be conducted in accordance with EPA Method 1631, Determination of Mercury in Water by Oxidation, Purge and Trap, and Cold Vapor Fluorescence Spectrometry.

SPECIAL CONDITIONS

B. NARRATIVE EFFLUENT LIMITATIONS

1. The effluent shall not contain a visible oil sheen, foam or floating solids at any time which would impair the usages designated by the classification of the receiving waters.

2. The effluent shall not contain materials in concentrations or combinations which are hazardous or toxic to aquatic life, or which would impair the usages designated by the classification of the receiving waters.

3. The discharges shall not cause visible discoloration or turbidity in the receiving waters which would impair the usages designated by the classification of the receiving waters.

4. Notwithstanding specific conditions of this permit the effluent must not lower the quality of any classified body of water below such classification, or lower the existing quality of any body of water if the existing quality is higher than the classification.

C. DISINFECTION

If chlorination is used as a means of disinfection, an approved chlorine contact tank providing the proper detention time consistent with good engineering practice must be utilized, followed by a dechlorination system if the total residual chlorine (TRC) cannot be met by dissipation in the detention tank. The TRC in the effluent shall at no time cause any demonstrable harm to aquatic life in the receiving waters. The dose of chlorine applied shall be sufficient to leave a TRC concentration that will effectively reduce bacteria to levels below those specified in Special Condition A, *"Effluent Limitations and Monitoring Requirements"*, of this permit.

D. TREATMENT PLANT OPERATOR

The treatment facility must be operated by a person holding a minimum of a **Grade II** certificate [or Registered Maine Professional Engineer] pursuant to Title 32 M.R.S.A., Section 4171 et seq. All proposed contracts for facility operation by any person must be approved by the Department before the permittee may engage the services of the contract operator.

E. LIMITATIONS FOR INDUSTRIAL USERS

Pollutants introduced into the waste water collection and treatment system by a non-domestic source (user) shall not pass through or interfere with the operation of the treatment system.

SPECIAL CONDITIONS

F. NOTIFICATION REQUIREMENT

In accordance with Standard Condition D, the permittee shall notify the Department of the following.

1. Any introduction of pollutants into the waste water collection and treatment system from an indirect discharger in a primary industrial category discharging process waste water; and

2. Any substantial change in the volume or character of pollutants being introduced into the waste water collection and treatment system by a source introducing pollutants into the system at the time of permit issuance. For the purposes of this section, notice regarding substantial change shall include information on:

   (a) the quality and quantity of waste water introduced to the waste water collection and treatment system; and

   (b) any anticipated impact caused by the change in the quantity or quality of the waste water to be discharged from the treatment system.

G. MONITORING AND REPORTING

Monitoring results obtained during the previous month shall be summarized for each month and reported on separate Discharge Monitoring Report (DMR) forms provided by the Department and **postmarked on or before the thirteenth (13th) day of the month or hand-delivered to a Department Regional Office such that the DMR's are received by the Department on or before the fifteenth (15th) day of the month** following the completed reporting period. A signed copy of the DMR and all other reports required herein shall be submitted to the Department assigned compliance inspector (unless otherwise specified) to the following address:

Department of Environmental Protection
Central Maine Regional Office
Bureau of Land and Water Quality
Division of Water Quality Management
17 State House Station
Augusta, Maine 04333

SPECIAL CONDITIONS

H. DISPOSAL OF SEPTAGE WASTE IN WASTE WATER TREATMENT FACILITY

During the effective period of this permit, the permittee is authorized to treat up to **5,000 gallons per week** of septage in its waste water treatment facility subject to the following terms and conditions:

1) This approval is limited to methods and plans described in the application and supporting documents. Any variations are subject to review and approval prior to implementation.

2) At no time shall addition of septage cause or contribute to effluent quality violations. If such conditions do exist, receipt of septage shall be suspended until effluent quality can be maintained.

3) The permittee shall maintain records which shall include, as a minimum, the following by date: volume of septage received, source of the septage (name of municipality), the hauler transporting the septage, the dates and volume of septage added to the waste treatment influent and test results.

4) Addition of septage shall not cause the treatment facilities design capacity to be exceeded. If, for any reason, the treatment facility becomes overloaded, receipt of septage shall be reduced or terminated in order to eliminate the overload condition.

5) Septage known to be harmful to the treatment processes shall not be accepted. Wastes which contain heavy metals, toxic chemicals, extreme pH, flammable or corrosive materials in concentrations harmful to the treatment operation shall be refused.

6) Holding tank waste water shall not be recorded as septage and should be reported in the treatment facility's influent flow.

I. WET WEATHER FLOW MANAGEMENT PLAN

The permittee shall maintain a current written Wet Weather Management Plan to direct the staff on how to operate the facility effectively during periods of high flow and maximize the volume of waste water receiving secondary treatment under all operating conditions. The Department acknowledges that the existing collection system may deliver flows in excess of the monthly average design capacity of the treatment plant during periods of high infiltration and rainfall. The plan shall include operating procedures for a range of intensities, address solids handling procedures (including septic waste and other high strength wastes if applicable) and provide written operating and maintenance procedures during the events. **The permittee shall review their plan annually** and record any necessary changes to keep the plan up to date.

SPECIAL CONDITIONS

J. OPERATION & MAINTENANCE (O&M) PLAN

The permittee shall maintain a current written comprehensive Operation & Maintenance (O&M) Plan. The plan shall provide a systematic approach by which the permittee shall at all times, properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit.

By December 31 of each year, or within 90 days of any process changes or minor equipment upgrades, the permittee shall evaluate and modify the O&M Plan including site plan(s) and schematic(s) for the wastewater treatment facility to ensure that it is up-to-date. The O&M Plan shall be kept on-site at all times and made available to Department and other regulattory personnel upon request.

Within 90 days of completion of new and or substantial upgrades of the wastewater treatment facility, the permittee shall submit the updated O&M Plan to their Department inspector for review and comment.

K. CHAPTER 530(2)(D)(4) CERTIFICATION

On or before December 31 of each year ***[PCS code 95799]*** the permittee is required to file a statement with the Department describing the following.

1. Changes in the number or types of non-domestic wastes contributed directly or indirectly to the wastewater treatment works that may increase the toxicity of the discharge;

2. Changes in the operation of the treatment works that may increase the toxicity of the discharge; and

3. Changes in industrial manufacturing processes contributing wastewater to the treatment works that may increase the toxicity of the discharge.

Further, the Department may require additional whole effluent toxicity (WET), analytical chemistry and or priority pollutant testing if it determines that there have been changes in the character of the discharge or if annual certifications described above are not submitted.

SPECIAL CONDITIONS

L. AMBIENT WATER QUALITY MONITORING

The permittee is required to participate in ambient water quality monitoring of Wilson Stream (part of the monitoring for the Sandy River watershed) to be conducted by the Department and or other interested parties during the term of this permit.

On or before April 1st of each year, ***[PCS code 95799]*** the permittee shall contact the Department's compliance inspector to inquire as to the schedule for conducting said monitoring.

M. REOPENING OF PERMIT FOR MODIFICATIONS

Upon evaluation of the tests results or monitoring requirements specified in Special Conditions of this permitting action, new site specific information, or any other pertinent test results or information obtained during the term of this permit, the Department may, at any time, and with notice to the permittee, modify this permit to: (1) include effluent limits necessary to control specific pollutants or whole effluent toxicity where there is a reasonable potential that the effluent may cause water quality criteria to be exceeded; (2) require additional effluent or ambient water quality monitoring if results on file are inconclusive; or (3) change monitoring requirements or limitations based on new information.

N. SEVERABILITY

In the event that any provision, or part thereof, of this permit is declared to be unlawful by a reviewing court, the remainder of the permit shall remain in full force and effect, and shall be construed and enforced in all aspects as if such unlawful provision, or part thereof, had been omitted, unless otherwise ordered by the court.

ATTACHMENT A

MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION
WHOLE EFFLUENT TOXICITY REPORT
FRESH WATERS

Facility Name _____ MEPDES Permit # _____

Facility Representative _____ Signature _____

By signing this form, I attest that to the best of my knowledge that the information provided is true, accurate, and complete.

Facility Telephone # _____ Date Collected _____ mm/dd/yy Date Tested _____ mm/dd/yy

Chlorinated? _____ Dechlorinated? _____

Results **% effluent**

	water flea	trout
A-NOEL		
C-NOEL		

Effluent Limitations

A-NOEL	
C-NOEL	

Data summary **water flea** **trout**

	% survival		no. young	% survival		final weight (mg)
QC standard	**A>90**	**C>80**	**>15/female**	**A>90**	**C>80**	**> 2% increase**
lab control						
receiving water control						
conc. 1 (%)						
conc. 2 (%)						
conc. 3 (%)						
conc. 4 (%)						
conc. 5 (%)						
conc. 6 (%)						
stat test used						

place * next to values statistically different from controls for trout show final wt and % incr for both controls

Reference toxicant water flea trout

	A-NOEL	C-NOEL	A-NOEL	C-NOEL
toxicant / date				
limits (mg/L)				
results (mg/L)				

Comments _____

Laboratory conducting test

Company Name _____ Company Rep. Name (Printed) _____

Mailing Address _____ Company Rep. Signature _____

City, State, ZIP _____ Company Telephone # _____

Report WET chemistry on DEP Form "WET and Analytical Chemistry Results - Fresh Waters, December 2005."

MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION
WET AND ANALYTICAL CHEMISTRY RESULTS
FRESH WATERS

Facility Name _____ MEPDES Permit # _____

Facility Representative _____ Signature _____

By signing this form, I attest that to the best of my knowledge that the information provided is true, accurate and complete.

Date Collected _____ mm/dd/yy Date Analyzed _____ mm/dd/yy

Lab ID No. _____ Actual Daily Flow _____ MGD Actual Monthly AverageFlow _____ MGD

	Analyte	Report Units	Receiving Water Results	Effluent Results	Reporting Level	Method
Analytes Required for Analytical Chemistry	Ammonia nitrogen	µg/L	*		µg/L	
	Total aluminum	µg/L	*		µg/L	
	Total arsenic	µg/L	*		µg/L	
	Total cadmium	µg/L	*		µg/L	
	Total chromium	µg/L	*		µg/L	
	Total copper	µg/L	*		µg/L	
	Total cyanide	µg/L	*		µg/L	
	Total lead	µg/L	*		µg/L	
	Total nickel	µg/L	*		µg/L	
	Total silver	µg/L	*		µg/L	
	Total zinc	µg/L	*		µg/L	
	Total hardness	mg/L	*		mg/L	
	Total residual chlorine **	mg/L			mg/L	
Additional Analytes Required For WET Chemistry	Alkalinity	mg/L	*		mg/L	
	Total magnesium	mg/L	*		mg/L	
	Total Calcium	mg/L	*		mg/L	
	Total organic carbon	mg/L	*		mg/L	
	Total solids	mg/L			mg/L	
	Total suspended solids	mg/L			mg/L	
	Specific conductivity	µmhos			µmhos	
	pH **	S.U.	*		S.U.	

* Except for Total Suspended Solids, Total Solids and Conductivity, the receiving water chemistry tests are optional. However, samples of the receiving water should be preserved and saved for the duration of the WET test. In the event of questions about the receiving water's possible effect on the WET results, chemistry tests should then be conducted.
** WET laboratories may conduct these tests on composite samples as part of their procedures.

Comments _____

Laboratory conducting test

Company Name _____ Company Rep. Name (Printed) _____

Mailing Address _____ Company Rep. Signature _____

City, State, ZIP _____ Company Telephone # _____

Maine Department of Environmental Protection
WET and Chemical Specific Data Report Form
This form is for reporting laboratory data and facility information. Official compliance reviews will be done by DEP.

Facility Name _____ **MEPDES #** _____ **Pipe #** _____ Facility Representative Signature _____
To the best of my knowledge this information is true, accurate and complete.

Licensed Flow (MGD)	
Acute dilution factor	
Chronic dilution factor	
Human health dilution factor	
Criteria type: M(arine) or F(resh)	

Flow for Day (MGD)[1] _____ **Flow Avg. for Month (MGD)[2]** _____

Date Sample Collected _____ Date Sample Analyzed _____

Laboratory Address _____ Telephone _____

Lab Contact _____ Lab ID # _____

ERROR WARNING ! Essential facility information is missing. Please check required entries in bold above.

	WHOLE EFFLUENT TOXICITY		Effluent Limits, %			Receiving Water or Ambient	Effluent Concentration (ug/L or as noted)		Possible Exceedence [7]		
			Acute	Chronic			WET Result, % Do not enter % sign	Reporting Limit Check	Acute	Chronic	
	Trout - Acute										
	Trout - Chronic										
	Water Flea - Acute										
	Water Flea - Chronic										
	WET CHEMISTRY										
	pH (S.U.)										
	Specific Conductance (umhos)										
	Total Organic Carbon (mg/L)										
	Total Solids (mg/L)										
	Total Suspended Solids (mg/L)										
	Alkalinity (mg/L)										
	Total Hardness (mg/L)										
	Total Magnesium (mg/L)										
	Total Calcium (mg/L)										
	ANALYTICAL CHEMISTRY [3]		Effluent Limits, ug/L						Possible Exceedence [7]		
		Reporting Limit	Acute[6]	Chronic[6]	Health[6]			Reporting Limit Check	Acute	Chronic	Health
	TOTAL RESIDUAL CHLORINE (mg/L)	0.05									
	AMMONIA	NA									
M	ALUMINUM	NA									
M	ARSENIC	5									
M	CADMIUM	1									
M	CHROMIUM	10									
M	COPPER	3									
M	CYANIDE	5									
M	LEAD	3									
M	NICKEL	5									
M	SILVER	1									
M	ZINC	5									

Maine Department of Environmental Protection
WET and Chemical Specific Data Report Form

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	PRIORITY POLLUTANTS [4]		Effluent Limits					Reporting Limit Check	Possible Exceedence [7]		
		Reporting Limit	Acute[6]	Chronic[6]	Health[6]				Acute	Chronic	Health
M	ANTIMONY	5									
M	BERYLLIUM	2									
M	MERCURY[4]	0.2									
M	SELENIUM	5									
M	THALLIUM	4									
A	2,4,6-TRICHLOROPHENOL	3									
A	2,4-DICHLOROPHENOL	5									
A	2,4-DIMETHYLPHENOL	5									
A	2,4-DINITROPHENOL	45									
A	2-CHLOROPHENOL	5									
A	2-NITROPHENOL	5									
A	4,6 DINITRO-O-CRESOL (2-Methyl-4,6-dinitrophenol)	25									
A	4-NITROPHENOL	20									
A	P-CHLORO-M-CRESOL (3-methyl-4-chlorophenol)+B80	5									
A	PENTACHLOROPHENOL	20									
A	PHENOL	5									
BN	1,2,4-TRICHLOROBENZENE	5									
BN	1,2-(O)DICHLOROBENZENE	5									
BN	1,2-DIPHENYLHYDRAZINE	10									
BN	1,3-(M)DICHLOROBENZENE	5									
BN	1,4-(P)DICHLOROBENZENE	5									
BN	2,4-DINITROTOLUENE	6									
BN	2,6-DINITROTOLUENE	5									
BN	2-CHLORONAPHTHALENE	5									
BN	3,3'-DICHLOROBENZIDINE	16.5									
BN	3,4-BENZO(B)FLUORANTHENE	5									
BN	4-BROMOPHENYLPHENYL ETHER	2									
BN	4-CHLOROPHENYL PHENYL ETHER	5									
BN	ACENAPHTHENE	5									
BN	ACENAPHTHYLENE	5									
BN	ANTHRACENE	5									
BN	BENZIDINE	45									
BN	BENZO(A)ANTHRACENE	8									
BN	BENZO(A)PYRENE	3									
BN	BENZO(G,H,I)PERYLENE	5									
BN	BENZO(K)FLUORANTHENE	3									
BN	BIS(2-CHLOROETHOXY)METHANE	5									
BN	BIS(2-CHLOROETHYL)ETHER	6									
BN	BIS(2-CHLOROISOPROPYL)ETHER	6									
BN	BIS(2-ETHYLHEXYL)PHTHALATE	3									
BN	BUTYLBENZYL PHTHALATE	5									
BN	CHRYSENE	3									
BN	DI-N-BUTYL PHTHALATE	5									
BN	DI-N-OCTYL PHTHALATE	5									
BN	DIBENZO(A,H)ANTHRACENE	5									
BN	DIETHYL PHTHALATE	5									
BN	DIMETHYL PHTHALATE	5									

Maine Department of Environmental Protection
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BN	FLUORANTHENE	5									
BN	FLUORENE	5									
BN	HEXACHLOROBENZENE	2									
BN	HEXACHLOROBUTADIENE	1									
BN	HEXACHLOROCYCLOPENTADIENE	10									
BN	HEXACHLOROETHANE	2									
BN	INDENO(1,2,3-CD)PYRENE	5									
BN	ISOPHORONE	5									
BN	N-NITROSODI-N-PROPYLAMINE	10									
BN	N-NITROSODIMETHYLAMINE	1									
BN	N-NITROSODIPHENYLAMINE	5									
BN	NAPHTHALENE	5									
BN	NITROBENZENE	5									
BN	PHENANTHRENE	5									
BN	PYRENE	5									
P	4,4'-DDD	0.05									
P	4,4'-DDE	0.05									
P	4,4'-DDT	0.05									
P	A-BHC	0.2									
P	A-ENDOSULFAN	0.05									
P	ALDRIN	0.15									
P	B-BHC	0.05									
P	B-ENDOSULFAN	0.05									
P	CHLORDANE	0.1									
P	D-BHC	0.05									
P	DIELDRIN	0.05									
P	ENDOSULFAN SULFATE	0.1									
P	ENDRIN	0.05									
P	ENDRIN ALDEHYDE	0.05									
P	G-BHC	0.15									
P	HEPTACHLOR	0.15									
P	HEPTACHLOR EPOXIDE	0.1									
P	PCB-1016	0.3									
P	PCB-1221	0.3									
P	PCB-1232	0.3									
P	PCB-1242	0.3									
P	PCB-1248	0.3									
P	PCB-1254	0.3									
P	PCB-1260	0.2									
P	TOXAPHENE	1									
V	1,1,1-TRICHLOROETHANE	5									
V	1,1,2,2-TETRACHLOROETHANE	7									
V	1,1,2-TRICHLOROETHANE	5									
V	1,1-DICHLOROETHANE	5									
V	1,1-DICHLOROETHYLENE (1,1-dichloroethene)	3									
V	1,2-DICHLOROETHANE	3									
V	1,2-DICHLOROPROPANE	6									
V	1,2-TRANS-DICHLOROETHYLENE (1,2-trans-dichloroethene)	5									
V	1,3-DICHLOROPROPYLENE (1,3-dichloropropene)	5									
V	2-CHLOROETHYLVINYL ETHER	20									

Maine Department of Environmental Protection
WET and Chemical Specific Data Report Form
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V	ACROLEIN	NA									
V	ACRYLONITRILE	NA									
V	BENZENE	5									
V	BROMOFORM	5									
V	CARBON TETRACHLORIDE	5									
V	CHLOROBENZENE	6									
V	CHLORODIBROMOMETHANE	3									
V	CHLOROETHANE	5									
V	CHLOROFORM	5									
V	DICHLOROBROMOMETHANE	3									
V	ETHYLBENZENE	10									
V	METHYL BROMIDE (Bromomethane)	5									
V	METHYL CHLORIDE (Chloromethane)	5									
V	METHYLENE CHLORIDE	5									
V	TETRACHLOROETHYLENE (Perchloroethylene or Tetrachloroethene)	5									
V	TOLUENE	5									
V	TRICHLOROETHYLENE (Trichloroethene)	3									
V	VINYL CHLORIDE	5									

Notes:

(1) Flow average for day pertains to WET/PP composite sample day.

(2) Flow average for month is for month in which WET/PP sample was taken.

(3) Analytical chemistry parameters must be done as part of the WET test chemistry.

(4) Priority Pollutants should be reported in micrograms per liter (ug/L).

(5) Mercury is often reported in nanograms per liter (ng/L) by the contract laboratory, so be sure to convert to micrograms per liter on this spreadsheet.

(6) Effluent Limits are calculated based on dilution factor, background allocation (10%) and water quality reserves (15% - to allow for new or changed discharges or non-point sources).

(7) Possible Exceedence determinations are done for a single sample only on a mass basis using the actual pounds discharged. This analysis does not consider watershed wide allocations for fresh water discharges.

ATTACHMENT B

Protocol for Total Phosphorus
Sample Collection and Analysis for Waste Water and Receiving Water Monitoring Required by Permits

Approved Analytical Methods: EPA 365.2, SM 4500-P B.5 E

Sample Collection: The Maine DEP is requesting that total phosphorus analysis be conducted on composite effluent samples, unless a facility's Permit specifically designates grab sampling for this parameter. Facilities can use individual collection bottles or a single jug made out of glass or polyethylene. Bottles and/or jugs should be cleaned prior to each use with dilute HCL. This cleaning should be followed by several rinses with distilled water. The sampler hoses should be cleaned, as needed.

Sample Preservation: During compositing the sample must be at 0-4 degrees C. If the sample is being sent to a commercial laboratory or analysis cannot be performed the day of collection then the sample must be preserved by the addition of 2 mls of concentrated H_2SO_4 per liter and refrigerated at 0-4 degrees C. The holding time for a preserved sample is 28 days.

Note: Ideally, Total P samples are preserved as described above. However, if a facility is using a commercial laboratory then that laboratory may choose to add acid to the sample once it arrives at the laboratory. The Maine DEP will accept results that use either of these preservation methods.

QA/QC: Run a distilled water blank and at least 2 standards with each series of samples. If standards do not agree within 2% of the true value then prepare a new calibration curve.

Every month run a blank on the composite jug and sample line. Automatically, draw distilled water into the sample jug using the sample collection line. Let this water set in the jug for 24 hours and then analyze for total phosphorus. Preserve this sample as described above.

Finalized May 2006

Protocol for Orthophosphate
Sample Collection and Analysis
for Waste Water and Receiving Water Monitoring Required by Permits

Approved Analytical Methods: EPA 365.2, SM 4500-P.E

Sample Collection: The Maine DEP is requesting that orthophosphate analysis be conducted on composite effluent samples unless a facility's Permit specifically indicates grab sampling for this parameter. Facilities can use individual collection bottles or a single jug made out of glass or polyethylene. Bottles and/or jugs should be cleaned prior to each use with dilute HCL. This cleaning should be followed by several rinses with distilled water. The sampler hoses should be cleaned, as needed.

Sample Preservation: During compositing the sample must be at 0-4 degrees C. The sample must be filtered immediately (within 15 minutes) after collection using a pre-washed 0.45-um membrane filter. Be sure to follow one of the pre-washing procedures described in the approved methods. Also, be aware that you will likely want to use a designated suction hose and collection container for the orthophosphate filtering process. If the sample is being sent to a commercial laboratory or analysis cannot be performed within 2 hours after collection then the sample must be kept at 0-4 degrees C. There is a 48-hour holding time for this sample although analysis should be done sooner, if possible.

QA/QC: Run a distilled water blank and at least 2 standards with each series of samples. If standards do not agree within 2% of the true value then prepare a new calibration curve.

Every month run a blank on the composite jug and sample line. Automatically, draw distilled water into the sample jug using the sample collection line. Let this water set in the jug for 24 hours and then analyze for total phosphorus. Preserve this sample as described above.

Finalized May 2006

MAINE POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT

AND

MAINE WASTE DISCHARGE LICENSE

FACT SHEET

Date: **June 2, 2006**

PERMIT NUMBER: **ME0101915**
LICENSE NUMBER: **W002365-5L-D-R**

NAME AND ADDRESS OF APPLICANT:

TOWN OF WILTON
P.O. Box 541, Davis Court
Wilton, Maine 04294

COUNTY: **Franklin County**

NAME AND ADDRESS WHERE DISCHARGE OCCURS:

Davis Court
Wilton, Maine 04294

RECEIVING WATER/CLASSIFICATION: **Wilson Stream/Class C**

COGNIZANT OFFICIAL AND TELEPHONE NUMBER: **Mr. Russell Mathers**
Superintendent, WWTF
(207) 645-3682
E-mail: **waterrat@megalink.com**

1. APPLICATION SUMMARY

a. Application - The Town of Wilton (Town hereinafter) has submitted a timely and complete application to the Department to renew combination Maine Pollutant Discharge Elimination System (MEPDES) permit #ME0101915/Waste Discharge License (WDL) #W002365-5L-C-R (permit hereinafter) that was issued on August 22, 2001 and is due to expire on August 22, 2006. The 8/22/01 permit authorized the discharge of up to a monthly average flow of 0.45 million gallons per day (MGD) of secondary treated sanitary waste waters to Wilson Stream, Class C, in Wilton, Maine.

1. APPLICATION SUMMARY (cont'd)

b. Modifications requested – The permittee has requested the following modifications to the MEPDES permit:

1. Delete the seasonal (June 1 – September 30) water quality based mass limits for biochemical oxygen demand (BOD) and total suspended solids (TSS) and establish year-round technology based BOD and TSS mass limits based on the facility's monthly average design flow of 0.45 MGD.

2. Change the seasonal (June 1 – September 30) water quality based mass limit for total phosphorus to a reporting requirement.

Both requests are based on the fact that the more stringent limitations may no longer be necessary based on more recent water quality information for Wilson Stream. Additional ambient water quality monitoring to be conducted by the Department in the near future should provide additional information regarding the appropriate limitations in future permitting actions.

c. Source Description: The waste water treatment facility receives sanitary waste water flows generated by approximately 1,000 residential users within the Town of Wilton. The collection system is a separated system approximately 25.5 miles in length with thirty (30) small grinder pump stations, six (6) major pump stations and no combined sewer overflow (CSO) points. All six of the major pump stations have on-site generators to provide back-up power in the event of a power failure and the remaining pump stations have emergency generator receptacles and manual transfer switches such that back-up power via a portable generator can be supplied to the stations in the event of a power failure. None of the pump stations have constructed emergency overflow/bypasses. In December of 1998, Wilton installed a combination sodium hydroxide/sodium bicarbonate corrosion control system for the drinking water supply in an effort to reduce copper and lead concentrations in waste waters being conveyed to the waste water treatment facility. The treatment facility is authorized to accept up to 5,000 gallons of septage per week from local septage haulers.

d. Waste Water Treatment: The facility provides a secondary level of treatment through a rotating biological contactor (RBC) treatment system. Major components of the treatment system include a bar rack, comminuter, roto-screens, four RBC trains of two wheels each, and two secondary clarifiers followed by chlorination and de-chlorination of the effluent via sodium hypochlorite and sodium bi-sulfite respectively. Treated waste waters are discharged to Wilson Stream via a three port diffuser which provides for rapid and complete mixing as determined by the Department in an evaluation dated 10/28/99.

A 12/29/89 licensing action also authorized the permittee to operate a surface waste water disposal system (spray irrigation) in the event the flow in Wilson Stream fell below 4.0 cfs. In a letter of 12/14/00, the permittee indicated that the surface waste water

1. APPLICATION SUMMARY (cont'd)

disposal system had never been used, was not operational and requested the Department remove all references to the system as well as the authorization to operate the system.

See Attacnment A of this Fact Sheet for an aerial photograph showing the location of the facility and Attachment B for a schematic of the waste water treatment facility.

2. PERMIT SUMMARY

a. Terms and conditions: This permitting action is carrying forward all the terms and conditions of the 8/22/01 permit with the following exceptions:

1) Establishing year-round technology based mass and concentration limits for BOD and TSS.

2) Establishing a requirement to maintain an up-to-date Operations & Maintenance (O&M) plan.

3) Establishing a requirement to maintain an up-to-date Wet Weather Flow Management plan.

4) Placing the monthly average water quality based total phoshorus limitation into abeyance and replacing the limit with a reporting requirement until the Department completes its ambient water quality monitoring of the Sandy River watershed including Wilson Stream.

5) Establishing monthly average and or daily maximum water quality based mass and concentration limitations for copper, lead and silver.

6) Incorporating new whole effluent toxicity (WET), priority pollutant and analytical chemistry monitoring requirements pursuant to the Department's recently revised rule Chapter 530, *Surface Water Toxics Control Program.*

7) Reducing the monitoring frequency for settleable solids from 1/Day to 3/Week..

b. History – The most relevant regulatory actions regarding the waste water treatment facility include, but are not limited to, the following:

December 12, 1989 – The Department issued WDL #W002365-59-A-R for a five-year term. The WDL contained secondary treatment limitations.

November 26, 1990 - The Department issued WDL modification #W002365-59-B-M that modified the 12/12/89 WDL by authorizing the Wilton facility to accept and treat up to 5,000 gallons of septage per week at the waste water treatment facility.

2. PERMIT SUMMARY (cont'd)

February 1, 1995 – The Department issued a letter to Wilton that administratively modified the 12/12/89 WDL to incorporate whole effluent toxicity (WET) and chemical specific (priority pollutant) testing pursuant to Department Regulation, Chapter 530.5, *Surface Water Toxics Control Program.*

September 13, 1996 – The Department issued a letter to the Town of Wilton requiring Wilton to prepare a Toxicity Reduction Evaluation (TRE) to address the exceedences of the ambient water quality criteria (AWQC) for ammonia.

October 10, 1996 – The Town of Wilton submitted a letter in response to the Department's 9/13/96 letter regarding toxicity issues. The letter indicated Wilton had been conducting a TRE to address exceedences of the AWQC for ammonia.

September 30, 1998 – The U.S. Environmental Protection Agency (EPA) issued National Pollutant Discharge Elimination System (NPDES) permit #ME0101915 for a five-year term.

May 23, 2000 – The Department administratively modified the 10/10/96 WDL to establish interim average and maximum concentration limits for mercury.

January 12, 2001 - The State of Maine received authorization from the EPA to administer the NPDES permitting program. From that date forward, the permitting program has been referred to as the Maine Pollutant Discharge Elimination System (MEPDES) permit program.

August 22, 2001 – The Department issued combination MEPDES permit #ME0101915/WDL #W002365-5L-C-R for a five-year term.

February 12, 2006 – The Town of Wilton submitted a timely and complete application to the Department to renew the MEPDES permit.

3. CONDITIONS OF PERMITS

Maine law, 38 M.R.S.A. Section 414-A, requires that the effluent limitations prescribed for discharges, including, but not limited to, effluent toxicity, require application of best practicable treatment (BPT), be consistent with the U.S. Clean Water Act, and ensure that the receiving waters attain the State water quality standards as described in Maine's Surface Water Classification System. In addition, 38 M.R.S.A., Section 420 and Department rule 06-096 CMR Chapter 530, *Surface Water Toxics Control Program,* require the regulation of toxic substances not to exceed levels set forth in Department rule 06-096 CMR Chapter 584, *Surface Water Quality Criteria for Toxic Pollutants*, and that ensure safe levels for the discharge of toxic pollutants such that existing and designated uses of surface waters are maintained and protected.

4. RECEIVING WATER STANDARDS

Maine law, 38 M.R.S.A., §467(15)(F)(1) classifies Wilson Stream at the point of discharge as a Class C waterway. Maine law, 38 M.R.S.A., §465(3) contains the classification standards for Class C waterways.

5. RECEIVING WATER CONDITIONS

A document entitled 2004 Integrated Water Quality Monitoring And Assessment Report, (referred to as the 305b Report) published by the Department indicates Wilson Stream is meeting the standards of its assigned classification. It is noted that all fresh water bodies in Maine carry a fish advisory for mercury due to atmospheric transport and deposition. See Section 6(h) of this Fact Sheet for a discussion regarding mercury.

6. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

a. Flow: The monthly average flow limitation of 0.45 MGD in the previous permitting action is being carried forward in this permitting action and is considered to be representative of the monthly average dry weather design flow of the waste water treatment facility. A review of the Discharge Monitoring Report data for the period January 2003 through December 2005 indicates the monthly average flow discharged has ranged from 0.1637 MGD to 0.3387 MGD with an arithmetic mean of 0.2395 MGD. The DMR for said period indicates the daily maximum flow discharged has ranged from 0.2029 MGD to 0.7895 MGD with an arithmetic mean of 0.3621 MGD.

b. Dilution Factors – Based on a monthly average flow limit of 0.45 MGD and a receiving water flow of 7.5 cfs[1], the acute, chronic and harmonic mean dilution factors associated with the discharge may be calculated as follows:

$$\text{Dilution Factor} \Rightarrow \frac{\text{River Flow (cfs)(Conv. Factor)} + \text{Plant Flow (MGD)}}{\text{Plant Flow (MGD)}}$$

$$\text{Acute: 1Q10} = 7.5 \text{ cfs} \Rightarrow \frac{(7.5 \text{ cfs})(0.6464) + (0.45 \text{ MGD})}{(0.45 \text{ MGD})} = 11.8{:}1$$

$$\text{Chronic: 7Q10} = 7.5 \text{ cfs} \Rightarrow \frac{(7.5 \text{ cfs})(0.6464) + (0.45 \text{ MGD})}{(0.45 \text{ MGD})} = 11.8{:}1$$

$$\text{Harmonic Mean:} = 22.5 \text{ cfs}^{(2)} \Rightarrow \frac{(22.5 \text{ cfs})(0.6464) + (0.45 \text{ MGD})}{(0.45 \text{ MGD})} = 33.3{:}1$$

Footnotes:

(1) The actual 7Q10 low flow value for Wilson Stream at the point of discharge is 4.0 cfs. The 7.5 cfs low flow value was derived in a Waste Load Allocation conducted by the Department in 1975 and is the threshold in which Wilson Stream

6. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)

Footnotes:

can assimilate the discharge of 0.45 MGD of waste water from the Wilton facility and attain Class C dissolved oxygen standards. The low flow value of 7.5 cfs was re-evaluated in April of 1993 and again in August of 2000 and remains applicable. The Town of Wilton has agreed to make every reasonable effort, within its capacity, to operate the Wilson Pond dam such that a minimum stream flow of 7.5 cfs is maintained in Wilson Stream at all times. The Town has also agreed to notify the Department in advance, if possible, if this stream flow cannot be maintained for any reason.

A review of the summer (June 1 – September 30) DMR data for the period June 2002 through September 2005 indicates the stream flow has ranged from 16 cfs to 149 cfs with an arithmetic mean of 66 cfs.

(2) The harmonic mean dilution factor is approximated by multiplying the 7Q10 by a factor of three (3). This multiplying factor is based on guidelines for estimation of human health dilution presented in the USEPA publication Technical Support Document for Water Quality-Based Toxics Control (Office of Water; EPA/505/2-90-001, page 88), and represents an estimation of harmonic mean flow.

c. Biochemical Oxygen Demand (BOD5) & Total Suspended Solids (TSS): - The previous permitting action established year-round monthly and weekly average BOD5 and TSS best practicable treatment (BPT) concentration limits of 30 mg/L and 45 mg/L respectively, that were based on secondary treatment requirements pursuant to Department rule Chapter 525(3)(III). The maximum daily BOD5 and TSS concentration limits of 50 mg/L were based on a Department best professional judgment of BPT. All three concentration limits are being carried forward in this permitting action and are applicable on a year-round basis.

As for mass limits, the previous permitting action established seasonal limitations. Technology based limits applicable between October 1 and May 31 (referred to as the non-summer months) were derived based on the concentration limits cited above and the monthly average design flow of 0.45 MGD for the facility. The mass limits were calculated as follows:

Monthly average: (0.45 MGD)(8.34)(30 mg/L) = 113 lbs/day
Weekly average: (0.45 MGD)(8.34)(45 mg/L) = 169 lbs/day
Daily maximum: (0.45 MGD)(8.34)(50 mg/L) = 188 lbs/day

6. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)

For the summer months (June 1 – September 30) water quality limits were established based on a Department best professional judgment of the limits that were necessary to ensure compliance with the Class C dissloved oxygen standards given water quality data and modeling at the time. The Fact Sheet for the previous permitting action contained the following text:

In addition to the secondary treatment requirements/limitations established above, the previous licensing action established a water quality based sliding scale for BOD5 and TSS. The license stipulated that if the flow in Wilson Stream fell below 7.5 cfs, the licensee was subject to more stringent mass limitations for BOD and TSS to ensure instream dissolved oxygen standards were attained. When Wilson Stream was less than 7.5 cfs but greater than 4.0 cfs, the licensee was subject to a sliding scale as specified in Special Condition C of the license. When Wilson Stream fell below 4.0 cfs, the license required the licensee to cease discharging to Wilson Stream and utilize the surface waste water disposal system (spray irrigation) located on an eleven (11) acre parcel just north of the secondary treatment complex.

More recent modelling by the Department (12/88) and instream sampling of Wilson Stream for phosphorus by the permittee between 1988-1995 indicates the low flow threshold for Wilson Stream is 7.5 cfs not 4.0 cfs and that the sliding scale in the previous licensing action is not adequate to maintain Class C dissolved oxygen (DO) standards in Wilson Stream at all times. It has been determined by the Department that during the summer months (June 1– September 30) when flows in the stream are statistically low and accompanied by temperatures condusive to benthic algal growth, more stringent BOD5 limits and the imposition of a phosphorus limitation requirement are necessary. Therefore, this permitting action is eliminating the sliding scale in the previous license and the invalidating the authorization to operate a surface waste water disposal system. This permitting action is requiring Wilton to a) make every reasonable effort to maintain a minimum stream flow of 7.5 cfs in Wilson Stream and b) reduce the summertime monthly average, weekly average and daily maximum BOD5 mass discharge to 106 #/day, 158 #/day and 176 #/day respectively. The Department established the water quality based weekly average limit of 158 #/day based on a best professional judgment of the reduction in mass to maintain dissolved oxygen standards and then calculated the monthly average and daily maximum limits using the same ratio between monthly average, weekly average and daily maximum mass limits established pursuant to secondary treatment requirements.

The summer BOD5 concentration limits established in this permitting action are secondary treatment requirements of 30 mg/l, 45 mg/L and 50 mg/L as monthly average, weekly average and daily maximum respectively. Taking into consideration the mass and concentration limits established above, Wilton would be limited to a flow of 0.42 MGD if discharging at full mass and concentration limits.

6. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)

Given the nature of secondary treatment, one would expect a proportional reduction in TSS if BOD5 levels were reduced to meet water quality standards. Therefore, the Department is establishing summer time TSS best practicable treatment concentration limits of 30 mg/L, 45 mg/L and 50 mg/L respectively and mass limits of 106 #/day, 158 #/day and 176 #/day respectively.

During the summer of 2003, Department staff responsible for water quality evaluations coordinated a site visit with the Superintendent of Wilton's waste water treatment facility and conducted some random sampling of Wilson Stream (under low flow conditions) above and below the point of discharge. Based on the limited dissolved oxygen data collected on the site visit and visual observations of the water quality, the Department indicated it may have established summer mass limitations for BOD and TSS that were overly stringent.

In addition to the Department's site visit in the summer of 2003, the permittee has provided the Department with documentation that the University of Maine at Farmington conducts annual water quality sampling of Wilson Stream as part of their biology curriculum. The University reports that dissolved oxygen levels upstream and downstream of the Wilton discharge are meeting Class C water quality standards.

The Department has reconsidered its position on the necessity for seasonal limits for BOD and TSS in this permitting action given the difference between the summer and non-summer limits in the previous permit is approximately 5%. This permit establishes year-round technology based monthly average, weekly average and daily maximum mass limits as calculated on the previous page.

A review of the DMR data for the period January 2003 – December 2005 indicates the facility has discharged as follows:

	BOD Concentration		
	Month Avg.	Weekly Avg.	Daily Max.
Range			
(summer)	12 - 29 mg/L	12 – 39 mg/L	12 – 39 mg/L
(non-summer)	7 - 29 mg/L	15 – 30 mg/L	15 – 30 mg/L
Arithmetic mean			
(summer)	17 mg/L	22 mg/L	22 mg/L
(non-summer)	17 mg/L	23 mg/L	23 mg/L
Annual Average	**17 mg/L**	**23 mg/L**	**23 mg/L**

6. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)

	BOD Mass		
	Month Avg.	Weekly Average	Daily Max.
Range			
(summer)	12 -56 lbs/day	16 -90 lbs/day	16 - 90 lbs/day
(non-summer)	20 -55 lbs/day	24 -79 lbs/day	24 - 79 lbs/day
Arithmetic mean			
(summer)	33 lbs/day	45 lbs/day	45 lbs/day
(non-summer)	36 lbs/day	50 lbs/day	50 lbs/day
Annual Average	**35 lbs/day**	**47 lbs/day**	**47 lbs/day**

	TSS Concentration		
	Month Avg.	Weekly Avg.	Daily Max.
Range			
(summer)	13 – 19 mg/L	14 – 27 mg/L	14 – 27 mg/L
(non-summer)	9 – 25 mg/L	12 – 28 mg/L	12 – 28 mg/L
Arithmetic mean			
(summer)	14 mg/L	21 mg/L	21 mg/L
(non-summer)	13 mg/L	18 mg/L	18 mg/L
Annual Average	**13 mg/L**	**19 mg/L**	**19 mg/L**

	TSS Mass		
	Month Avg.	Weekly Avg.	Daily Max.
Range			
(summer)	20 – 37 lbs/day	32 – 49 lbs/day	28 - 49 lbs/day
(non-summer)	17 - 46 lbs/day	22 – 97 lbs/day	22 – 97 lbs/day
Arithmetic mean			
(summer)	28 lbs/day	36 lbs/day	37 lbs/day
(non-summer)	28 lbs/day	43 lbs/day	42 lbs/day
Annual Average	**28 lbs/day**	**41 lbs/day**	**40 lbs/day**

This permitting action is carrying forward a requirement of 85% removal for BOD and TSS pursuant to Department rule Chapter 525(3)(III)(a&b)(3) except in the circumstances where the monthly average influent concentration is less than 200 mg/L.

Monitoring frequencies for BOD and TSS of 1/Week are being carried forward from the previous permitting action and are based on a long standing Department guidance for facilities with a monthly average flow limitation greater than 0.10 MGD but less than 0.50 MGD.

6. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)

d. Settleable Solids - The previous permit established a daily maximum concentration limit of 0.3 ml/L (considered by the Department to be representative of BPT) with a monitoring frequency of 1/Day. The limitation is being carried forward in this permitting action. A review of the DMR data for the period January 2003 through December 2005 indicates the permitee has reported <0.1 mL/L every month for said period. Given this data, the Department is making a best professional judgment that a monitoring frequency of 3/Week is sufficient to determine on-going compliance with the daily maximum limit.

e. Escherichia coliform (*E. coli.*) bacteria: The previous permitting action established seasonal (May 15 – September 30) monthly average and daily maximum *E. coli* bacteria limits of 142 colonies/100 ml and 949 colonies/100 ml based on the State of Maine Water Classification Program criteria for Class C waters. This permitting action is carrying forward the water quality based limits. A review of the DMR data for the period May 2003 through September 2005 indicates the monthly average *E. coli* bacteria levels discharged have ranged from 19 colonies/100 ml to 53 colonies/100 ml with an arithmetic mean of 32 colonies/100 ml and the daily maximum *E. coli* bacteria levels discharged have ranged from 33 colonies/100 ml to 97 colonies/100 ml with an arithmetic mean of 58 colonies/100 ml. The monitoring frequency for *E.coli* bacteria of 1/Week is being carried forward from the previous permitting action and is based on a long standing Department guidance for facilities with a monthly average flow limitation greater than 0.10 MGD but less than 0.50 MGD.

f. Total Residual Chlorine (TRC) - The previous permitting action established a monthly average technology based (BPT) limit of 0.1 mg/L and a daily maximum water quality based limit of 0.22 mg/L that are being carried forward in this permitting action. Limits on TRC are specified to ensure that ambient water quality standards are maintained and that BPT technology is being applied to the discharge. The Department imposes the more stringent of the water quality or technology based limits in permitting actions. End-of-pipe water quality based concentration thresholds may be calculated as follows:

Parameter	Acute Criteria	Chronic Criteria	Acute Dilution	Chronic Dilution	Acute Limit	Chronic Limit
Chlorine	19 ug/L	11 ug/L	11.8:1	11.8:1	0.22 mg/L	0.13 mg/L

Example calculation: Acute – 0.019 mg/L (11.8) = 0.22 mg/L

To meet the water quality based thresholds calculated above, the permittee must continue to dechlorinate the effluent prior to discharge. The Department has established daily maximum and monthly average best practicable treatment (BPT) limitations of 0.3 mg/L and 0.1 mg/L respectively, for facilities that need to dechlorinate their effluent unless calculated water quality based limits are lower than the BPT limits. In the case of the Wilton facility, the calculated acute water quality based limit is lower than 0.3 mg/l,

6. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)

thus the daily maximum water quality based limit of 0.22 mg/L is imposed. As for the monthly average, the calculated chronic water quality based limit is higher than the BPT limit of 0.1 mg/L, thus the monthly average BPT limit of 0.1 mg/L is imposed.

A review of the DMR data for the period May 2003 through September 2005 indicates the monthly average and daily maximum TRC limitations have been reported as <0.1 mg/L for both monthly average and daily maximum for every month during said period. The monitoring frequency for TRC of 1/Day is being carried forward from the previous permitting action and is based on a long standing Department guidance for facilities with a monthly average flow limitation greater than 0.10 MGD but less than 0.50 MGD.

g. pH Range- The previous permitting action established a pH range limitation of 6.0 – 9.0 standard units pursuant to a Department rule found at Chapter 525(3)(III)(c). The limits are considered BPT and are being carried forward in this permitting action. A review of the DMR data for the period January 2003 – December 2005 indicates the limitation range has never been exceeded. The monitoring frequency for pH of 5/Week is being carried forward from the previous permitting action and was based on a Department best professional judgment of a frequency it deemed appropriate to determine on-going compliance at the facility. It is noted the Department's long standing guidance establishes a default monitoring frequency of 1/Day.

h. Mercury: Pursuant to Maine law, 38 M.R.S.A. §420 and Department rule, 06-096 CMR Chapter 519, *Interim Effluent Limitations and Controls for the Discharge of Mercury*, the Department issued a *Notice of Interim Limits for the Discharge of Mercury* to the permittee thereby administratively modifying WDL # W002365-5L-C-R by establishing interim average and maximum effluent concentration limits of 27.2 parts per trillion (ppt) and 40.8 ppt, respectively, and a minimum monitoring frequency requirement of four tests per year for mercury. The interim mercury limits were scheduled to expire on October 1, 2001. However, effective June 15, 2001, the Maine Legislature enacted Maine law, 38 M.R.S.A. §413, sub-§11 specifying that interim mercury limits and monitoring requirements remain in effect. It is noted that the mercury effluent limitations have not been incorporated into Special Condition A, *Effluent Limitations And Monitoring Requirements*, of this permit as the limits and monitoring frequencies are regulated separately through Maine law, 38 M.R.S.A. §413 and Department rule Chapter 519. The interim mercury limits remain in effect and enforceable and modifications to the limits and/or monitoring frequencies will be formalized outside of this permitting document pursuant to Maine law, 38 M.R.S.A. §413 and Department rule Chapter 519.

6. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)

i. Whole Effluent Toxicity (WET) & Chemical-Specific Testing: Maine law, 38 M.R.S.A., Sections 414-A and 420, prohibit the discharge of effluents containing substances in amounts that would cause the surface waters of the State to contain toxic substances above levels set forth in Federal Water Quality Criteria as established by the USEPA. Department Rules, 06-096 CMR Chapter 530, *Surface Water Toxics Control Program*, and Chapter 584, *Surface Water Quality Criteria for Toxic Pollutants* set forth ambient water quality criteria (AWQC) for toxic pollutants and procedures necessary to control levels of toxic pollutants in surface waters. WET, priority pollutant and analytical chemistry testing, as required by Chapter 530, is included in this permit in order to fully characterize the effluent. This permit also provides for reconsideration of effluent limits and monitoring schedules after evaluation of toxicity testing results. The monitoring schedule includes consideration of results currently on file, the nature of the wastewater, existing treatment and receiving water characteristics.

WET monitoring is required to assess and protect against impacts upon water quality and designated uses caused by the aggregate effect of the discharge on specific aquatic organisms. Acute and chronic WET tests are performed on invertebrate and vertebrate species. Priority pollutant and analytical chemistry testing is required to assess the levels of individual toxic pollutants in the discharge, comparing each pollutant to acute, chronic, and human health ambient water quality criteria (AWQC) as established in Chapter 584.

Chapter 530 establishes four categories of testing requirements based predominately on the chronic dilution factor. The categories are as follows:

Level I – chronic dilution factor of <20:1.
Level II – chronic dilution factor of ≥20:1 but <100:1.
Level III – chronic dilution factor ≥100:1 but <500:1 or >500:1 and Q ≥1.0 MGD
Level IV – chronic dilution >500:1 and Q ≤1.0 MGD

Department rule Chapter 530 (2)(D) specifies the criteria to be used in determining the minimum monitoring frequency requirements for WET, priority pollutant and analytical chemistry testing. Based on the Chapter 530 criteria, the permittee's facility falls into the Level I frequency category as the facility has a chronic dilution factor <20:1. Chapter 530(2)(D)(1) specifies that routine surveillance and screening level testing requirements are as follows:

Screening level testing

Level	WET Testing	Priority pollutant testing	Analytical chemistry
I	4 per year	1 per year	4 per year

6. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)

Surveillance level testing

Level	WET Testing	Priority pollutant testing	Analytical chemistry
I	2 per year	Not required	4 per year

A review of the data on file with the Department for the permittee indicates that to date, it has fulfilled the WET and chemical-specific testing requirements of the former Chapter 530.5. See Attachment C of this Fact Sheet for a summary of the WET test results and Attachment D of this Fact Sheet for a summary of the chemical-specific test dates.

WET test evaluation

Chapter 530 §(3)(E) states "*For effluent monitoring data and the variability of the pollutant in the effluent, the Department shall apply the statistical approach in Section 3.3.2 and Table 3-2 of USEPA's "Technical Support Document for Water Quality-Based Toxics Control" (USEPA Publication 505/2-90-001, March, 1991, EPA, Office of Water, Washington, D.C.) to data to determine whether water-quality based effluent limits must be included in a waste discharge license. Where it is determined through this approach that a discharge contains pollutants or WET at levels that have a reasonable potential to cause or contribute to an exceedence of water quality criteria, appropriate water quality-based limits must be established in any licensing action.*"

On May 31, 2006, the Department conducted a statistical evaluation on the most recent 60 months of WET test results on file with the Department in accordance with the statistical approach cited above. The statistical evaluation indicates the discharge from the permittee's waste water treatment facility has one test result of <4% for the water flea on 11/27/05 that exceeded the critical chronic water quality threshold of 8.5%. Therefore, a limitation of 8.5% for the water flea is being established in this permit.

Chapter 530(3)(C) states in part, "*If these data indicate that the discharge is causing an exceedence of applicable water quality criteria, then: (1) the licensee must, within 45 days of becoming aware of an exceedence, submit a TRE plan for review and approval and implement the TRE after Department approval; and (2) the Department must, within 180 days of the Department's written approval of the TRE plan, modify the waste discharge license to specify effluent limits and monitoring requirements necessary to control the level of pollutants and meet receiving water classification standards.*"

6. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)

A more in-depth review of the entire WET test data for Wilton (dating back to 1993) indicates the only other C-NOEL for the water flea (15 test results) of concern is a C-NOEL test result of 4% on 1/21/03. The permittee has been made aware of the exceeedence and has submitted a TRE to the Department for review and approval. The permittee proposes to conduct C-NOEL WET testing for the water flea at the default surveillance level WET testing frequency of 2/Year during the season the test results of concern occurred (October through March).

As for the remaining WET species tested to date, there are no exceedences or reasonable potential to exceed critical acute or chronic water quality thresholds. Therefore, no additional WET limits are being established in this permitting action.

Monitoring frequencies for WET testing established in this permitting action are based on the Chapter 530 rule. Chapter 530(2)(D)(3)(d) states in part that for Level I facilities "*... may reduce surveillance testing to one WET or specific chemical series per year provided that testing in the preceding 60 months does not indicate any reasonable potential for exceedence as calculated pursuant to section 3(E)*". Based on the results of the 5/31/06 statistical evaluation, the permittee qualifies in part for the testing reduction. Therefore, this permit action establishes a surveillance level WET testing requirements as follows:

Beginning upon permit issuance and lasting through 12 months prior to permit expiration, surveillance level testing is being established as follows:

Level	WET Testing
I	1 per year for the brook trout 2 per year for the water flea[(1)]

Footnotes:

(1) Tests are to be conducted between October and March and there shall be at least 90 days between routine sampling events.

Department rule Chapter 530 (2)(D)(1) specifies that screening level testing is to be established as follows:

Beginning 12 months prior to permit expiration and every five years thereafter;

Level	WET Testing
I	4 per year

6. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)

Chapter 530 (2)(D) states:

(4) All dischargers having waived or reduced testing must file statements with the Department on or before December 31 of each year describing the following.

(a) Changes in the number or types of non-domestic wastes contributed directly or indirectly to the wastewater treatment works that may increase the toxicity of the discharge;
(b) Changes in the operation of the treatment works that may increase the toxicity of the discharge; and
(c) Changes in industrial manufacturing processes contributing wastewater to the treatment works that may increase the toxicity of the discharge.

Special Condition K, *Chapter 530 (2)(D)(4) Certification,* of this permitting action requires the permitee to file an annual certification with the Department.

It is noted however that if future WET testing results indicates the discharge exceeds critical water quality thresholds, this permit will be reopened pursuant to Special Condition M, *Reopening of Permit For Modification*, of this permit to establish applicable limitations and monitoring frequencies.

Analytical chemistry and priority pollutant testing evaluation

As with WET test results, on May 31, 2006, the Department conducted a statistical evaluation on the most recent 60 months of analytical chemistry and priority pollutant test results on file with the Department in accordance with the statistical approach outlined in Chapter 530. The statistical evaluation indicates that the test results listed below have a reasonable potential to exceed the acute and or chronic AWQC. It is noted all other parameters evaluated do not exceed or have a reasonable potential to exceed acute, chronic or human health AWQC.

Date	Parameter	Test result	AWQC Criteria	RP threshold[1]
9/6/05	Copper	12.0 ug/L	Acute – 2.36 ug/L	10.2 ug/L
1/27/03	Copper	12.0 ug/L	Acute – 2.36 ug/L	10.2 ug/L
3/10/02	Copper	13.0 ug/L	Acute – 2.36 ug/L	10.2 ug/L
5/9/04	Copper	14.0 ug/L	Chronic – 3.07 mg/L	13.3 ug/L
2/21/06	Copper	17.0 ug/L	Chronic – 3.07 mg/L	13.3 ug/L
3/10/02	Lead	4.0 ug/L	Chronic - 0.41 ug/L	1.8 ug/L
11/27/05	Lead	4.0 ug/L	Chronic - 0.41 ug/L	1.8 ug/L
1/27/03	Lead	3.0 ug/L	Chronic - 0.41 ug/L	1.8 ug/L
9/6/05	Lead	3.0 ug/L	Chronic - 0.41 ug/L	1.8 ug/L
3/10/02	Silver	1.3 ug/L	Acute – 0.23 ug/L	0.8 ug/L
5/9/04	Silver	1.1 ug/L	Acute – 0.23 ug/L	0.8 ug/L

6. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)

Footnotes:

(1) RP factor of 1.9 for copper was based on a n=8 test results.
RP factor of 1.9 for lead based on a n=8 test results.
RP factor of 2.3 for silver based on a n=5 test results.

Chapter 530 §3 states, "*In determining if effluent limits are required, the Department shall consider all information on file and effluent testing conducted during the preceding 60 months. However, testing done in the performance of a Toxicity Reduction Evaluation (TRE) approved by the Department may be excluded from such evaluations.*"

Chapter 530 §4(C), states "*The background concentration of specific chemicals must be included in all calculations using the following procedures. The Department may publish and periodically update a list of default background concentrations for specific pollutants on a regional, watershed or statewide basis. In doing so, the Department shall use data collected from reference sites that are measured at points not significantly affected by point and non-point discharges and best calculated to accurately represent ambient water quality conditions.*" *The Department shall use the same general methods as those in section 4(D) to determine background concentrations. For pollutants not listed by the Department, an assumed concentration of 10% of the applicable water quality criteria must be used in calculations.* The Department does not have information on the background levels of metals in the water column of Wilson Stream. Therefore, a default background concentration of 10% of the applicable water quality criteria is being used in the calculations of this permitting action.

Chapter 530 4(E), states "*In allocating assimilative capacity for toxic pollutants, the Department shall hold a portion of the total capacity in an unallocated reserve to allow for new or changed discharges and non-point source contributions. The unallocated reserve must be reviewed and restored as necessary at intervals of not more than five years. The water quality reserve must be not less than 15% of the total assimilative quantity*". Therefore, the Department is reserving 15% of the applicable water quality criteria in the calculations of this permitting action.

Chapter 530 §(3)(E) states "*... that a discharge contains pollutants or WET at levels that have a reasonable potential to cause or contribute to an exceedence of water quality criteria, appropriate water quality-based limits must be established in any licensing action.*

Chapter 530 §(3)(D) states "*Expression of effluent limits. Where the need for effluent limits has been determined, limits derived from acute water quality criteria must be expressed as daily maximum values. Limits derived from chronic or human health criteria must be expressed as monthly average values.*" Therefore, this permit establishes monthly average end-of-pipe (EOP) mass and concentrations limits for copper and lead and daily maximum mass and concentration limits for silver.

6.EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

The derivation for these limits is as follows:

Copper:

EOP concentration = [Dilution factor x 0.75 x AWQC] + [0.25 x AWQC]

Chronic AWQC = 2.36 ug/L
Acute AWQC = 3.07 ug/L

Chronic EOP = [11.8 x 0.75 x 2.36 ug/L] + [0.25 x 2.36 ug/L] = 21.5 ug/L
Acute EOP = [11.8 x 0.75 x 3.07 ug/L] + [0.25 x 3.07 ug/L] = 27.9 ug/L

Based on a permitted flow of 0.45 MGD, EOP mass limits are as follows:

Parameter	Calculated EOP Concentrations	Month Avg. Mass Limit	Daily Max. Mass Limit
Copper (Chronic)	21.5 ug/L	0.081 #/day	---
Copper (Acute)	27.9 ug/L	---	0.10 #/day

Example Calculation: Chronic- $\frac{(21.5\ ug/L)(8.34)(0.45\ MGD)}{1000\ ug/mg} = 0.081\ \#/day$

Lead

EOP concentration = [Dilution factor x 0.75 x AWQC] + [0.25 x AWQC]

Chronic AWQC = 0.41 ug/L

Chronic EOP = [11.8 x 0.75 x 0.41 ug/L] + [0.25 x 0.41 ug/L] = 3.7 ug/L

Based on a permitted flow of 0.45 MGD, EOP mass limits are as follows:

Parameter	Calculated EOP Concentrations	Month Avg. Mass Limit	Daily Max. Mass Limit
Lead(Chronic)	3.7 ug/L	0.014 #/day	---

Example Calculation: Chronic- $\frac{(3.7\ ug/L)(8.34)(0.45\ MGD)}{1000\ ug/mg} = 0.014\ \#/day$

6. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

Silver

EOP concentration = [Dilution factor x 0.75 x AWQC] + [0.25 x AWQC]

Acute AWQC = 0.23 ug/L

Chronic EOP = [11.8 x 0.75 x 0.23 ug/L] + [0.25 x 0.23 ug/L] = 2.09 ug/L

Based on a permitted flow of 0.45 MGD, EOP mass limits are as follows:

Parameter	Calculated EOP Concentrations	Month Avg. Mass Limit	Daily Max. Mass Limit
Silver(Acute)	2.09 ug/L	0.0078 #/day	---

Example Calculation: Acute- $\frac{(2.09 \text{ ug/L})(8.34)(0.45 \text{ MGD})}{1000 \text{ ug/mg}} = 0.0078$ #/day

Chapter 530 §(3)(D)(1) states "*For specific chemicals, effluent limits must be expressed in total quantity that may be discharged and in effluent concentration. In establishing concentration, the Department may increase allowable values to reflect actual flows that are lower than permitted flows and/or provide opportunities for flow reductions and pollution prevention provided water quality criteria are not exceeded. With regard to concentration limits, the Department may review past and projected flows and set limits to reflect proper operation of the treatment facilities that will keep the discharge of pollutants to the minimum level practicable.*"

As not to penalize the permittee for operating at flows less than the permitted flow, [see Section 6(a) of this Fact Sheet] the Department is establishing concentration limits based on a factor of 1.5. Therefore, concentration limits for the parameters of concern in this permit are as follows:

Parameter	Calculated EOP Concentration	Monthly Avg. Conc. Limit	Daily Max. Conc. Limit
Copper	21.5 mg/L	32 ug/L	---
Copper	37.9 ug/L	---	57 ug/L
Lead	3.7 ug/L	5.6 ug/L	---
Silver	2.09 ug/L	3.1 ug/L	---

6. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

Chapter 530 does not establish specific monitoring frequencies for parameters that exceed or have a reasonable to exceed AWQC. This permitting action is establishing the monitoring requirement frequencies for copper, lead and silver based on a best professional judgment given the timing, frequency and severity of the exceedence or reasonable to exceed AWQC. Due to multiple test results that have a reasonable potential to exceed AWQC for all three parameters, the Department has made a best professional judgment that routine surveillance level monitoring of 1/Quarter is sufficient to determine on-going compliance with the AWQC.

With the exception of copper, lead and silver, monitoring frequencies for priority pollutant and analytical chemistry testing established in this permitting action are based on the Chapter 530 rule. Chapter 530(2)(D)(3)(d) states in part that for Level I facilities "*... may reduce surveillance testing to one WET or specific chemical series per year provided that testing in the preceding 60 months does not indicate any reasonable potential for exceedence as calculated pursuant to section 3(E)*". Based on the results of the 5/31/06 statistical evaluation, the permittee qualifies for the testing reduction. Therefore, this permit action establishes a surveillance level analytical chemistry testing (with the exception of copper, lead and silver) as follows:

Beginning upon permit issuance and lasting through 12 months prior to permit expiration

Level	Priority pollutant testing	Analytical chemistry
I	Not required	1 per year

Department rule Chapter 530 (2)(D)(1) specifies that screening level testing is to be established for analytical chemistry and priority pollutant testing as follows:

Beginning 12 months prior permit expiration and every five years thereafter

Level	Priority pollutant testing	Analytical chemistry
I	1 per year	4 per year

Chapter 530 (2)(D) states:

(4) All dischargers having waived or reduced testing must file statements with the Department on or before December 31 of each year describing the following.

(a) Changes in the number or types of non-domestic wastes contributed directly or indirectly to the wastewater treatment works that may increase the toxicity of the discharge;

6. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

(b) Changes in the operation of the treatment works that may increase the toxicity of the discharge; and

(c) Changes in industrial manufacturing processes contributing wastewater to the treatment works that may increase the toxicity of the discharge.

As with WET testing, Special Condition K, *Chapter 530 (2)(D)(4) Certification*, of this permitting action requires the permittee to file an annual certification with the Department.

In the event future statistical evaluations demonstrate that the reasonable potential to exceed AWQC is no longer applicable for copper, lead or silver or that the result(s) in question fall outside the 60-month evaluation period, this permit may be reopened pursuant to Special Condition M, *Reopening of Permit For Modifications*, of this permit to remove the limitation(s) and or reduce the monitoring requirement(s).

j. Septage – The previous permitting action authorized Wilton to accept and treat up to 5,000 gallons of septage per week from local septage haulers. Department rule Chapter 555, *Addition of Septage To Waste Water Treatment Facilities*, limits the quantity of septage treated at a facility to 1% of the design capacity of treatment facility. With a design capacity of 0.45 MGD, 5,000 gallons per week or 1,000 gallons per day only represents 0.2% of said capacity. The permittee has submitted an up-to-date Septage Management Plan as an exhibit to their February 2006 application for permit renewal. The Department has reviewed and approved said plan and determined that under normal operating conditions, the addition of 5,000 gallons per week of septage to the facility will not cause or contribute to upset conditions of the treatment process.

k. Total phosphorus and orthophosphate – The previous permitting action established a water quality based monthly average total phosphorus limit of 3.8 lbs/day. The 8/22/01 permit established a schedule of compliance with a deadline of June 1, 2004 to comply with said limit. The permittee installed a phosphorus treatment system consisting of ferric chloride addition to precipitate out phosphorus. A review of the monitoring data for the summers of 2004 and 2005 (June – September) indicate the monthly average mass ranged from 1.7 lbs/day to 2.9 lbs/day with an arithmetic mean of 2.4 lbs/day. As for the daily maximum mass, the discharge levels ranged from 2.0 lbs/day to 3.6 lbs/day with an arithmetic mean of 2.9 lbs/day. Daily maximum concentration levels of total phosphorus discharged range from 1.4 mg/L to 2.0 mg/L with an arithmetic mean of 1.2 mg/L.

Subsequent to the issuance of the 8/22/01 permit, the Department, the Town of Wilton and the University of Maine at Farmington have conducted ambient water quality sampling of Wilson Stream above and below the point of discharge from the Town's waste water treatment facility. Though the sampling regime's have varied, all three

6. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

entities report the water quality of Wilson Stream is attaining Class C water quality standards. Based on the results of this monitoring, the Department is placing the total phosphorus limitation into abeyance and replacing it with a "report only" requirement for both total phosphorus and orthophosphate. Orthophosphate monitoring is being required in an effort to determine the relationship between total phosphorus and the bio-available orthophosphate. Once enough data is collected to develop a statsically defensible relationship between the two forms of phosphorus, the permittee may petition the Department to modify the permit to suspend or delete the monitoring requirement for orthophosphate. Ambient water quality sampling will be conducted by the Department (in cooperation with the Town and interested parties) during the term of this permit in an effort to re-calibrate its model for Wilson Stream to determine if phosphorus limitations are necessary.

7. DISCHARGE IMPACT ON RECEIVING WATER QUALITY

As permitted, the Department has determined the existing and designated uses of the receiving water uses will be maintained and protected and the discharge will not cause or contribute to failure of the receiving water to meets assigned classification.

8. PUBLIC COMMENTS

Public notice of this application was made in the Lewiston Sun Journal newspaper on February 10, 2006. The Department receives public comments on an application until the date a final agency action is taken on that application. Those persons receiving copies of draft permits shall have at least 30 days in which to submit comments on the draft or to request a public hearing, pursuant to Chapter 522 of the Department's rules.

9. DEPARTMENT CONTACTS

Additional information concerning this permitting action may be obtained from and written comments should be sent to:

Gregg Wood
Division of Water Quality Management
Bureau of Land and Water Quality
Department of Environmental Protection
17 State House Station
Augusta, Maine 04333-0017 Telephone: (207) 287-7693
E-mail: gregg.wood@maine.gov

10. RESPONSE TO COMMENTS

During the period of June 2, 2006 through the date of issuance of this permit, the Department solicited comments on the proposed draft MEPDES permit/WDL for the discharge from the Town of Wilton's waste water treatment facility. The Department did not receive comments from the permittee, state or federal agencies, or interested parties that resulted in any substantive change(s) in the terms and conditions of the permit. Therefore, the Department has not prepared a Response to Comments.